

MONTHLY WEATHER REVIEW,

JULY, 1878.

WAR DEPARTMENT,

Office of the Chief Signal Officer,

DIVISION OF

TELEGRAMS AND REPORTS FOR THE BENEFIT OF COMMERCE AND AGRICULTURE.

INTRODUCTION.

In compiling the present REVIEW the following data, received up to August 13th, have been made use of, viz: the regular tri-daily weather charts, containing the data of simultaneous observations taken at 116 Signal Service stations and 12 Canadian stations, as telegraphed to this office; monthly journals and means, 121 and 141 respectively, from the former, and monthly means from 14 of the latter; reports from 22 special Sunset stations; 228 monthly registers from Voluntary Observers; 36 monthly registers from United States Army Post Surgeons; Marine Records; International Simultaneous Observations; monthly report of the Weather Service of the State of Iowa; reliable newspaper extracts; special reports.

Instructions have been issued establishing stations of the 1st Class, as follows:—May 18th, 1878, Deadwood to be discontinued, and Lead City, Dakota, to be established; June 22nd, establishing Columbus, Ohio; July 8th, Atlanta, Ga., Des Moines, Iowa, and Madison, Wis.; July 10th, Chattanooga, Tenn., and Charlotte, N. C. Lead City began reporting June 1st; Columbus, July 1st; Des Moines, August 1st. The following have been announced as *Display Stations*, (for displaying Cautionary Signals,) viz:—September 16th, 1877, Menomonee, Mich., and Sturgeon Bay, Horn's Pier, Kewaunee, Sheboygan, Racine, Green Bay, Kenosha and Manitowoc, Wis., as *Section One*, with Milwaukee as a centre. August 8th, 1878, New Buffalo, Mich., to repeat Chicago signals. January 20th, Ludington, Mich.; July 8th, Pentwater, Traverse City, Frankfort and Northport, Mich.; July 23rd, St. Joseph and South Haven, Mich., as *Section Three*, with Grand Haven as the centre. July 8th, Mackinac, Mich. July 15th, Bay City, East Tawas, Forrester, Port Austin and Rogers City, Mich., as *Section Four*, with Detroit as the centre. July 8th, Monroe, Mich., Fairport and Ashtabula, Ohio, and Dunkirk, N. Y., as *Section Five*, with Cleveland as the centre. July 8th, Charlotte, N. Y., to repeat the Rochester signals. July 8th, Cape Vincent, N. Y., as *Section Six*, with Oswego as the centre. August 1st, Millbridge, Belfast, Deer Island and Booth Bay, Me., and Portsmouth, N. H., as *Section Seven*, with Portland as the centre. August 1st, Newburyport, Thatcher's Island, Marblehead, Highland Light, Chatham, Hyannis and New Bedford, Mass., as *Section Eight*, with Boston as the centre. August 1st, Watch Hill, R. I., to repeat the New London signals. February 25th, Lewes, Del. July 1st, Old Topsail Inlet, (Fort Macon,) N. C.

BAROMETRIC PRESSURE.

Upon chart No. II is shown the general distribution of the atmospheric pressure for the month by the isobaric lines. Compared with the means for July of previous years, the pressure for the present month averages slightly lower for all the districts, except along Lake Superior, where it has been slightly higher.

The *Local Barometric Ranges*, as reduced to sea-level, for the month, vary as follows: New England, from 0.68 of an inch at New Haven to 0.97 at Burlington; Middle Atlantic States, 0.46 at Cape Henry to 0.69 at Albany; South Atlantic States, 0.36 at Jacksonville to 0.46 at Wilmington; Gulf States, 0.30 at New Orleans to 0.33 at Key West, 0.42 at Corsicana, and 0.54 at Camp Stockton; Ohio valley and Ten-

nessee, 0.42 at Memphis to 0.69 at Pittsburg; Lower Lake region, 0.75 at Sandusky to 0.90 at Oswego; Upper Lake region, 0.59 at Alpena to 0.70 at Chicago; Upper Mississippi valley, 0.57 at St. Paul to 0.69 at Davenport; Red River of the North valley, 0.76 at Breckenridge and Pembina; Missouri valley, 0.60 at Leavenworth to 0.79 at Bismarck; Plains of Nebraska and Kansas, 0.68 at Dodge City to 0.78 at North Platte; Rocky Mountains, 0.32 at Santa Fé to 0.39 at Denver; Utah, 0.55 at Salt Lake City; Idaho Territory, 0.46 at Boise City; Nevada, 0.39 at Winnemucca to 0.43 at Pioche; California, 0.25 at Los Angeles to 0.29 at San Francisco and 0.33 at Red Bluff; Oregon, 0.43 at Roseburg to 0.49 at Portland.

Areas of High Barometer.—Of these, six are described. None of them were very decided, and little interest attaches to them.

No. I.—This is a continuation of the area of high pressure described in the June Review as No. IX. 1st, it covered the Northwest, with cool, clear or clearing weather. At midnight the barometers, corrected for temperature and instrumental errors, read about 0.20 of an inch above the normals from Minnesota to western Kansas. 2nd, the central highest pressure advanced to Lake Superior, with cool, northerly winds and clear weather, thence toward Texas; midnight barometer at Marquette 30.20 in., or 0.25 above normal. 3rd, the pressure continued nearly stationary over the Upper Lakes and increasing toward the St. Lawrence valley. 4th, a. m. barometers at Duluth and Montreal 0.30 and 0.31, respectively, above the normals. During the day the pressure rapidly diminished in the St. Lawrence valley, and by midnight the highest covered Lake Superior. 5th, continued over the Lake region, with diminished pressure. 6th and 7th, it disappeared in advance of low pressure No. II.

No. II.—9th, it advanced southeastward over Manitoba and northern Dakota. 10th, it reached the Lake region, with cool, northerly winds; p. m. barometer at Marquette 0.21 above normal. 11th, moved to the St. Lawrence valley; midnight barometers at Montreal and Quebec 0.33 above normals. 12th, disappeared southeastward over New England.

No. III.—From the 7th to the 11th the pressure was above the normal along the South Atlantic coast, with generally clear weather. 12th, it reached its maximum; a. m. barometer at Cape Hatteras 30.24 in., or 0.21 above normal.

No. IV.—During the 12th and 13th the pressure rose in Oregon. 14th, a. m., barometer at Portland 30.26 in., or 0.28 above normal. During the day it apparently withdrew to the northward.

No. V.—19th, following storm No. VIII, it was observed at night as advancing southeastward over Manitoba and Dakota. 20th, northerly winds, generally cool, clear weather and rising barometer prevailed in the Northwest; p. m. barometer at Pembina 0.28 above normal. 21st, a. m. barometer at Pembina 30.26 in., or 0.36 above normal. In connection with the area of low pressure in its advance, high northerly winds and gales were frequently produced in the Lake region. 22nd, by midnight the pressure was highest over the Upper Lakes, with high northwesterly winds and gales thence east and southeastward to the Atlantic coast. 23rd, the pressure was above the normal from the Upper Mississippi valley and Lakes to Virginia, with cool, clear weather, and highest in the Lake region. 24th, it disappeared off the Middle Atlantic coast.

No. VI.—26th, it appeared in the extreme Northwest. 27th, advanced eastward over the Lake region. 28th, a. m. barometer at Alpena 30.15 in., or 0.20 above normal. During the day it extended toward southern New England. 29th, passed to the New England coast and the eastern British Provinces. 30th, a. m. barometer at Chatham 0.28 above normal, after which it slowly passed to the eastward.

Areas of Low Barometer.—As shown on chart No. I, eleven have been sufficiently well marked to be charted and described. Nos. VIII and IX were particularly extensive and destructive, having been accompanied by violent thunder-storms in many sections.

No. I.—This disturbance developed from the storm described in the June REVIEW as No. X. 1st, in the afternoon it appeared as an extensive barometric trough, reaching from the Eastern Gulf coast northward over Lake Huron into Canada, with the lowest pressure over Indiana and Ohio; p. m. barometers at Cincinnati and Columbus, Ohio, 29.79 in. Threatening and rainy weather prevailed from the Upper Lakes to the Gulf and South Atlantic States, with frequent thunder-storms and occasionally high winds. 2nd, the central pressure rose somewhat. Frequent light rains fell from Lakes Huron and Erie to the Gulf and South Atlantic States, with occasional thunder-storms and high winds. 3rd, it was dissipated by area of high pressure No. I, which succeeded it, but with the same conditions over the same area as on the previous day. 4th, in a slight barometric trough, which extended from southern New England to western Pennsylvania, heavy and destructive thunder-storms occurred, with large hail in latter. At Pittsburg, 3 to 5 p. m., heavy thunder-storm passed from southwest to northeast up the Alleghany valley; maximum velocity of wind, thirty miles per hour at 3.30 p. m.; total rainfall, 2.80 inches; several buildings swept away, houses flooded, &c; eight miles up the valley, at Ross Grove, large maple trees were uprooted, killing seven and injuring eighteen persons; on Sandy creek, twelve miles up the valley, a house was swept away, drowning five inmates. Not any signals were displayed or needed. The following maximum hourly velocities were recorded in the interior: Cairo, E. 30; Fort Sill, N. 36; St. Louis, N. 25 miles.

No. II.—1st, frequent rains, easterly winds and diminishing pressure in Florida indicated the advance of this storm. 2nd, the pressure reached its minimum; p. m. barometer at Punta Rasa 29.77 in., or 0.30

below normal. Threatening and rainy weather continued in Florida, with frequent gales, and extended to South Carolina. 3rd, easterly gales and rainy weather prevailed along the South Atlantic coast from Cape Hatteras southward. Signals were ordered to be displayed, morning of the 2nd, at Key West and St Mark's; 3rd, thence north along the coast to Cape Hatteras. Excepting St. Mark's and Jacksonville, they were justified. Maximum velocities: Key West, W. 36; Tybee Island, E. 37; Charleston, E. 36; Smithville, E. 38; Cape Lookout, SE. 36 miles.

No. III.—The barometer, which had been falling along the Pacific coast for two days previous, reached its lowest point during the morning of the 1st; a. m. barometer at San Francisco 0.22 below normal, and a high westerly wind in the afternoon. Light rains fell in Washington Ty., and northern Oregon. 2nd, it advanced toward the Rocky Mountain region. High winds or gales prevailed from the northern half of California to Colorado, Dakota and western Nebraska; light rains in Washington Ty., and Oregon. 3rd, the pressure fell to its minimum in Utah and Montana; p. m. barometer at Salt Lake City 0.38 and at Virginia City 0.41 below the normals. High winds and gales continued over the same area as the previous day, and in western Minnesota. The rain-area extended eastward to Montana Ty., 4th, the central pressure increased, but high winds and gales were frequent from Nevada to Colorado, western Nebraska and Dakota. 5th, it disappeared apparently to the northward, with continued high southerly winds and gales from Colorado and western Nebraska northward. Maximum velocities: San Francisco, W. 32; Winnemucca, SW. 40; Pioche, S. 33; Salt Lake City, NW. 44; Denver, SE. and NW. 36; North Platte, S. 54; Bismarck, SE. 48; Breckenridge, SE. 36 miles.

No. IV.—It is quite possible that this is a continuation of the storm just described, and was forced to take a northerly course by the high pressure area in its front and covering the Lake region. 6th, occasional rains fell in the Northwest, with high southerly winds, and frequent rains in the Southwest. 7th, it disappeared into Canada. Occasional rains prevailed from the Northwest and Upper Lakes to the Ohio valley, with thunder-storms at places. 8th, as the central depression progressed eastward to the north of the limit of the stations, frequent rains, with thunder-storms, resulted over the northern half of the country; at Grand Island, Neb., a destructive wind-storm; at Nashville, a very heavy thunder-storm. 9th, the centre disappeared to the northeastward of the St. Lawrence valley. Frequent rains, thunder-storms and high winds accompanied it as far south as the Middle States. Signals were displayed the 10th along the New Jersey and North Carolina coasts, but too late, and the former were not justified. Maximum velocities: Dodge City, S. 40; North Platte, NW. 60; Bismarck, W. 36; Pembina, S. 30; Stockton, Texas, SE. 35; Knoxville, SW. 28; Grand Haven, SW. 48; Port Huron, NE. 30; Kittyhawk, SW. 30; Cape May, E. 30; Sandy Hook, W. 32; Boston, SW. 30; Mt. Washington, W. 48 miles.

No. V.—As shown on the chart, this storm was formed by the union of two disturbances. 9th, the midnight barometer, at Portland, Or., fell to 0.25 below the normal. High southwest winds prevailed at San Francisco and Fillmore, Utah; at Kit Carson, Col., a heavy wind, rain and hail-storm; heavy hail-storm east of North Platte; heavy and destructive thunder-storms in the eastern portion of Nebraska at night. 10th, the rain-area extended to Lake Michigan, with frequently high winds; in Columbus Co., Wis., heavy hail. 11th, threatening and rainy weather, with thunder-storms, prevailed over the Lake region, the Northwest, Wyoming, Colorado, New Mexico and Arizona. In Iowa, Wisconsin and northwestern Illinois much destruction was caused by floods. At Dubuque, Iowa, midnight to 5:15 a. m., severe thunder-storm; numerous houses, barns, &c., struck by lightning; country in vicinity of Centralia (ten miles west) flooded for miles around; railroad bridges damaged and all trains delayed from two to twelve hours. At Tucson, Arizona Ty., 4:45 to 6:30 p. m., heavy thunder and rain-storm; 4:45 p. m., lowest barometric reading this year; total rain-fall 5.10 inches; damage to town estimated at from \$25,000 to \$40,000; buildings completely ruined; west of town one vast lake; the Arroyos, north of town, resembled huge rivers. Throughout Arizona Ty., from 12th to 14th, very heavy thunder-storms, accompanied by heavy rains and waterspouts; houses unroofed and fences blown down. At Aqua Fria, twenty-seven telegraph poles reduced to fragments. At Phoenix, office struck and portion of battery destroyed. 12th, although the movement of the central depression could not be traced, a barometric trough formed eastward to the Middle States, in which unusually severe and destructive rain and thunder-storms occurred. Not any signals were ordered. Maximum velocities: San Francisco, SW. 28; Salt Lake City, SW. 28; Cheyenne, NW. 32; Denver, S. and NW. 36; Stockton, Texas, SE. 40; North Platte, S. 48; Breckenridge, SE. 36; Cape May, S. 44; Atlantic City, E. 43; Barnegat, NE. 32 miles.

No. VI.—14th, the pressure having rapidly diminished during the preceding night, this storm was central near to and west of Quebec in the morning, with rainy weather in the Lower St. Lawrence valley, and a southeast gale, veering to northeast, at Father Point. During the day and night the rain-area extended to New England and Nova Scotia. 15th, it disappeared beyond Nova Scotia. Signals were displayed at Eastport, but not justified. Maximum velocities: Mt. Washington, NW., 60; Father Point, NE., 43 miles.

No. VII.—14th, rapidly diminishing pressure, increasing southeasterly winds and rain-areas from Montana to the Upper Mississippi valley indicated the approach of a storm. During the night a heavy rain-storm at Dubuque flooded the surrounding country. 15th, frequent gales, mostly southerly, and occasional rains prevailed from Utah and Colorado to Manitoba, Minnesota and Wisconsin, with a continued fall in the barometer; p. m. barometer at Bismarck 0.51 below normal. 16th, two distinct depressions developed, one passing into Canada and north of Lake Superior, the other advancing southeastward to Iowa. Frequent rains and thunder-storms accompanied them from the Northwest and Upper Lakes southwestward

to Arizona and New Mexico, with high wind and gales at places. 17th, the southern branch gradually disappeared, after having produced heavy thunder-storms from the Northwest to Indian Territory. The northern branch took a southeasterly course toward New England, with frequent rains and thunder-storms from northeastern New York north and eastward. 18th, as the centre moved toward Nova Scotia, light rains were frequent from the Lower Lake region eastward, with thunder-storms, which were reported as violent and destructive at places in New York. 19th, a. m. barometer at Sydney, Cape Breton, 29.56 in., or 0.40 below normal, after which the centre disappeared northeastward. Cautionary Signals were ordered for the eastern New England coast on the afternoon of the 17th, but reported as not justified. Warnings were sent at the same time to Toronto for the Canadian stations in the provinces of Quebec, New Brunswick, Nova Scotia, Cape Breton and Newfoundland. Maximum velocities: Denver, SE. 36; Dodge City, S. 40; North Platte, S. 48; Bismarck and St. Paul, E. 36; Duluth, SW. 32; Sandusky, SW. 35; Cape Lookout, SW. 30; Morgantown, S. 43; Mt. Washington, W. 75 miles.

No. VIII.—16th, frequent light rains fell in Oregon and Washington Territory, with falling barometer. High westerly winds prevailed at San Francisco, and southwest gales in northern Nevada. At Olympia, p. m. barometer 29.67 in., or 0.29 below normal. By midnight it was probably central in northwestern Montana. 17th, it advanced into eastern Montana, followed by clearing weather in Oregon, Washington Territory and Idaho. 18th, the centre moved into the Red River of the North valley, producing high winds or gales and thunder-storms from thence to Kansas. 19th, although the main depression was north of Lake Superior, a barometric trough extended southwestward toward New Mexico, in which thunder-storms were frequent. 20th, light rains and high winds were occasionally reported from the Northwest, Lakes and St. Lawrence valley to the South Atlantic and East Gulf States. 21st, the storm centre took a southeastward course into Maine; midnight barometer at Portland 29.42 in., or 0.53 below normal. At New Orleans and Knoxville, heavy thunder-storms prevailed; along the North Carolina coast, southwest gales. From the northern portion of the Middle States and New England to the Provinces of Quebec, New Brunswick and Nova Scotia, heavy rains, gales and destructive thunder and hail-storms were frequent, with much damage to crops, buildings, trees, railroads, &c. At Northampton, Mass., a tornado; Napanee, Ontario, hurricane. At North Albany, N. Y., "about 1:20 p. m., most terrific cyclone, lasting ten seconds, leaving desolation and ruin; unroofed and destroyed sixteen buildings, &c."; observers saw "two storms approach in nearly opposite directions, one from the northeast, accompanied by a heavy black cloud, moving swiftly, and another from a point a little south of west; the two met in the vicinity at West Albany, where the cyclone apparently formed." The Signal service observer, ($\frac{1}{2}$ mile south of storm,) observed "a funnel-shaped cloud moving rapidly from the west, too high to do much damage until it reached North Albany, when it seemed to come to the earth's surface; it moved with such velocity that every thing was carried in an easterly direction regardless of its whirling motion"; at the station a velocity of seventy miles per hour was registered for a few minutes, from the west. Boston and vicinity, Mass., 4:30 to 6:30 p. m., "severe thunder-storm, doing considerable damage north of city; numerous buildings and trees were struck in Cambridge, Lexington, Charlestown, Chelsea, Newton, Malden and Medford; a violent wind was reported at Winthrop, and a yacht was overturned off Rainsford Island, drowning one person; near Salem, tents were blown down and buildings unroofed." Over the Lakes northwesterly gales were also frequent. 22nd, p. m. barometer at Eastport 29.26 in., or 0.65 below normal. Light rains continued from the northern portions of New York and New England northeastward; high northwesterly winds and gales from the Lower Lakes and North Carolina to the Gulf of St. Lawrence. 23rd, the storm disappeared eastward, with diminishing winds along the Atlantic coast. Cautionary Signals were ordered on the morning of the 21st for the eastern New England coast, and reported as justified from a few stations only. The same morning warnings were sent to Toronto for the stations in the provinces of Quebec, New Brunswick, Nova Scotia, Cape Breton and New Foundland. On the 22nd, Off-shore Signals were displayed along the North Carolina and eastern New England coasts, but were ordered too late. Maximum velocities: San Francisco, W. 28; Winnemucca, SW. 34; Denver, NW. 36; North Platte, NW. 60; Breckenridge, S. 32; Escanaba, N. 29; Grand Haven and Saugeen, NW. 38; Sandusky, N. 36; Cape Lookout, SW. 45; Cape May, NW. 38; Sandy Hook, NW. 41; Boston, W. 30; Mt. Washington, NW. 62; Father Point, NE. 55 miles.

No. IX.—23rd, this storm began developing in the country between the Missouri valley and California. In Nevada and Utah thunder-storms were frequent, and southerly gales in Colorado and western Nebraska. 24th, the centre passed into Nebraska, with rain from Indian Territory and the Northwest to Montana; midnight barometer at Omaha 0.16 below normal. 25th, the central pressure diminished; midnight barometer at Keokuk 29.45 in., or 0.44 below normal. The rain-area reached from the Lake region to Montana, Wyoming, Colorado and Indian Territory, and was heavy in Iowa and Illinois. 26th, its movement northeastward was very rapid, with a continued diminution of the pressure at its centre; midnight, barometer at Burlington 29.28, or 0.64 below normal. From Indian Territory and Tennessee northeastward to Lake Huron, the St. Lawrence valley and New England, rainy weather, gales and destructive thunder-storms were frequent. At Chicago a heavy northeast wind-storm, followed at night by heavy rain—over four inches in about seven hours—flooding cellars and causing damage estimated at \$100,000; southwestern portion of city under water. On Lake Michigan the storm was quite severe. "At 5:30 p. m. a tornado developed two or three miles west of South Hartford, Washington Co., N. Y., in which position dark, heavy clouds, from east and north, were observed to meet; it then moved northeastward, with a terrific noise, over the northern part of Hartford village, passed to the southwest of Middle

Granville, and thence across the State line into Vermont, when it appeared to divide; barns, trees, fences, &c., were entirely demolished, and, as it passed over 'Martin Pond' and Meltowe river, large quantities of water were scooped up and carried some distance; it travelled about fourteen miles in an almost straight line; was about five rods in width, and passed any one point in about fifty seconds." 27th, it disappeared over the Gulf of St. Lawrence, producing gales from thence southwestward to the North Carolina coast. In northern Texas very heavy rains fell, accompanying thunder-storms, on this day and the following day. Cautionary Signals were ordered for Lake Michigan stations on the 25th; for those along Lakes Huron, Erie and Ontario and the coast from North Carolina to Maine, the 26th; and were very generally justified. Warnings were also sent to Toronto for the Canadian stations in the provinces of Quebec, New Brunswick, Nova Scotia, Cape Breton and Newfoundland. Maximum velocities: Salt Lake City, NE. 28; Denver, S. 36; Dodge City, W. 40; St. Louis, S. 40; North Platte, NE. 36; Chicago, NE. 25; Cleveland, SE. 45; Oswego, S. 25; Cape Lookout, SW. 40; Cape Henry, SW. 32; Cape May, S. 44; Barnegat and Sandy Hook, SW. 32; New London, SW. 30; Wood's Holl, SW. 38; Portland, NW. 36; Eastport, S. 35; Mt. Washington, NW. 100 miles.

No. X.—28th, the pressure diminished in the Northwest, with frequent rains. 29th, a barometric trough formed toward the Ohio valley. Thunder-storms were occasionally reported from the Gulf and South Atlantic States, and frequent rains from thence northward to the Middle States and Lower Lake region; occasionally high winds from the coast. By midnight it had developed into a slight depression, which was central in Ohio. 30th, it moved into the Middle States, where it was dissipated on the following day. The Cautionary Signals displayed the 30th from North Carolina to Massachusetts were ordered rather late. Maximum velocities: Shreveport, S. 32; St. Mark's, S. 28; Cape Lookout, SW. 40; Cape Hatteras, SW. 34; New London, E. 26; Boston, E. 30; Mt. Washington, SE. 50 miles.

No. XI.—29th, it advanced eastward toward the Northwest, producing high winds, and in Dakota and western Minnesota thunder-storms. 30th, the centre apparently passed over the northern portion of Minnesota, with frequent rains in the Northwest and Wisconsin. In Carver, Rice and Dakota counties, Minn., severe hail-storms, doing much damage; track ten to twelve miles wide, traveling from northwest to southeast. Wadena county, Minn., great damage to crops from heavy rain and wind storm. 31st, occasional rains, thunder-storms and gales were reported from the Lake region to the Northwest, and large hail from Independence, Iowa. Not any signals were displayed, and would have been justified at only two Lake stations. Maximum velocities: North Platte, S. 36; Bismarck, W. 26; Breckenridge, SE. 37; Leavenworth, NW. 28; St. Louis, E. 30; Davenport, SW. 50; Milwaukee, W. 28; Sandusky, SW. 27 miles.

INTERNATIONAL METEOROLOGY.

April 8th, off Cape Horn, very heavy weather, seas swept decks.

May 5th, 77° S., 86° W., ship Royal Dane encountered gale lasting seven days. U. S. Flagship Hartford, at Montevideo, reports, 8th, night, barometer 29.57 inches; NW. and W. fresh, heavy rain-squalls, thunder and lightning; 9th, a. m. barometer 29.55, strong W. and WSW. gales; 12th, evening, barometer 29.64, W. fresh, increasing to moderate WSW. gale, rain-squalls, thunder and lightning; 13th, 1 to 2 p. m., barometer 29.50, heavy WSW. gale, blowing heaviest from 2 to 7 p. m., with rising pressure; 14th, heavy SW. gale; 15th, moderate S. by W. gale. 18th, 34° 46' N., 60° 11' W., (by dead reckoning,) 8 a. m., WNW. gale and heavy sea. 22d, Pacific Mail S. S. City of Peking, reports, at Hong Kong, from a little before midnight of the 21st to 2:30 a. m. of 22d, severe thunder-storms, with very heavy rain, doing serious damage to roads, buildings, &c., by rush of water down hill-side, and considerable loss of life by rise in creek where boats were moored for the night. 25th, 42° S., 100° W., heavy SE. gale, lasting twenty-four hours. 26th, off Cape of Good Hope, heavy westerly gales.

June 7th, 26° 30' N., 55° 20' W., high sea. 10th, 60° N., 20° W., heavy squall; 60° 34' N., 19° 30' W., (night of 10th and 11th,) severe squalls and heavy seas. 20th, U. S. Steamship Gettysburg at Ben Ghazi, N. Africa, reports heavy white squall, (force 8) from W. by N., lasting four minutes.

July 1st, 43° 29' N., 43° 50' W., fresh NW. gale and heavy W. sea. 2d, 48° 30' N., 35° 58' W., squally; 46° 14' N., 40° 14' W., WNW. gale, heavy W. sea. 3d, 48° 21' N., 33° 36' W., SW. strong breeze, high sea. 4th, 46° 40' N., 40° 54' W., increasing WNW. storm; 45° 54' N., 37° 41' W., fresh WNW. gale. 5th, 44° 47' N., 46° 01' W., westerly wind and sea decreasing; 49° 45' N., 24° 40' W., high WSW. sea; 50° 47' N., 26° 09' W., high W. sea; 17° 43' N., 101° 40' W., 6:30 to 8 p. m., thunder-storm, wind veering from NE. to SW., with gale from SE. at 7 p. m., heavy rain throughout watch, sea rough, barometer at 6 and 7 p. m. 29.49 in. 6th, 49° 43' N., 30° 45' W., high W. sea. 7th, 48° 55' N., 40° 18' W., heavy southerly gale, high sea, rain; 48° 16' N., 38° 15' W., moderate to fresh WNW., SW. and W. gale, and high westerly sea. 8th, 47° 46' N., 46° 42' W., heavy SW., WNW., gale, very high sea, squally; 47° 30' N., 30° 08' W., moderate westerly gale, heavy W. sea; 46° 42' N., 45° 29' W., fresh SW. gale, high W. sea. 10th 46° 16' N., 48° 18' W., heavy rain. 13th, ship Garelock, on July 3rd, lat. 23° N., long. 58° W., thence to Bermuda July 13th, reports had variable winds, squalls and frequent water-spouts. 20th, 44° 17' N., 55° 08' W., fresh SSE. gale; about 130 miles W. of St. John's, N'f'd, moderate gale and high sea; off the Banks, N'f'd, heavy NW. squall. 21st, 48° 38' N., 41° 47' W., fresh SW. to WSW. gales; 50° 02' N., 38° 39' W., strong SW. and W. wind, rough sea, ship pitching hard. 22nd, 46° 28' N., 47° 29' W., fresh W. gale; 49° 0' N., 42° 40' W., NW.